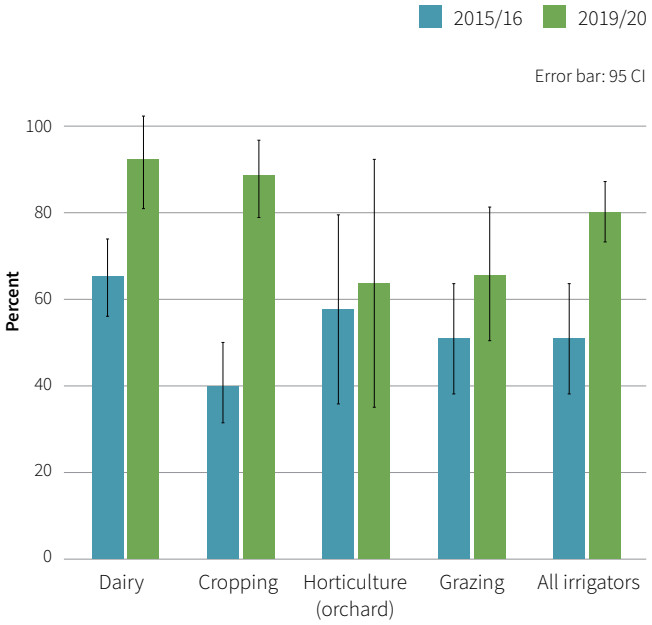
FARM IRRIGATION SURVEY
IRRIGATION UPGRADES
GMID[1] 2019/20[2]

Irrigators are upgrading on-farm irrigation infrastructure, but many continue to face significant barriers in doing so.

BACKGROUND

Based on the 2019/20 irrigation season, irrigators were surveyed[3] to understand property-level irrigator decision-making, and build understanding of how the Goulburn Murray Irrigation District (GMID) is changing, and how water users are adapting to reduced water availability. The project obtained a representative sample of irrigators for each of the key land use activities (Dairy, Cropping, Horticulture, and Grazing) against Water Use Licence. This fact sheet presents 2019/20 on-farm irrigation infrastructure upgrade data[4] and compares it to 2015/16 data.[5]

Figure 1: Upgrades to on-farm infrastructure



IRRIGATION METHODS ON-FARM IN 2019/20

Gravity irrigation channel remains the most popular irrigation method for Dairy, Cropping and Grazing, with more than 86% of irrigators operating this irrigation system on their properties. Pipe and riser use was twice that reported in 2015/16, yet less than a third (28.5%) of irrigators were using this method. Pressurised systems was also twice that reported in 2015/16 but remain less than 7%. The majority of Horticulture use micro drip and subsurface irrigation (91%).

UPGRADES TO ON-FARM IRRIGATION INFRASTRUCTURE

Over 80% of irrigators in 2019/20 said that they had upgraded their irrigation infrastructure, compared to 50% in the 2015/16 survey. Dairy (92%) and Cropping (88%) had the highest percentage of irrigators who had improved their on-farm infrastructure. The number of Cropping irrigators who had upgraded infrastructure increased from 40% to 88% (Figure 1). In 2019/20, 28% of irrigators said they planned to upgrade irrigation infrastructure over the next five years, which was lower than in 2015/16 where 48% of irrigators planned works.

UPGRADED ON-FARM INFRASTRUCTURE AND LAND USE

Dairy irrigators were significantly more likely to upgrade on-farm infrastructure than Horticulture or Grazing. This may be due to factors such as the suitability of existing on-farm irrigation infrastructure.

1. The project area is referred to collectively as the Goulburn Murray Irrigation District (GMID), which includes the GMID (including Woorinen), Tresco and Nyah Irrigation Districts.
2. 2019/20 data is reflective of activity at the point of survey and based on the 2019/20 irrigation season (August 2019 to May 2020).
3. Full technical reports which outline the survey methodology are available at www.gbmca.vic.gov.au
4. Sample size is an important marker of the quality of survey research which can influence the validity and generalisability of study results. In this study, care must be exercised in drawing conclusions about subgroups of population when the number of units captured by the sample in the subgroup is very small.
5. GB CMA (2017). Regional Irrigated Land and Water Use Mapping in the Goulburn Murray Irrigation District (Technical Report), 2015/16. Goulburn Broken Catchment Management Authority, Shepparton.

FARM IRRIGATION SURVEY

IRRIGATION UPGRADES

GMID 2019/20

TYPES OF IRRIGATION INFRASTRUCTURE UPGRADES UNDERTAKEN

Irrigation infrastructure upgrades included laser grading (62%), reuse systems (39%), new irrigation systems (e.g. pipe and risers, centre pivot and linear moves, and upgrade of channels and outlets (22%)), installation of automation (18%), and irrigation scheduling (e.g. soil moisture monitoring and irrigation scheduling probes) (16%).

FUNDING OF IRRIGATION INFRASTRUCTURE

Irrigators who had upgraded their on-farm irrigation infrastructure were asked whether they had received funding in the last ten years to do so (e.g. through an irrigation efficiency program). Forty-one percent of irrigators in 2019/20 indicated that they had received funding for their upgrades in the last ten years compared to 36% in 2015/16. More than half of Dairy (58%) had received funding to upgrade infrastructure.

BARRIERS TO UPGRADING ON-FARM IRRIGATION INFRASTRUCTURE

Over the past fifteen years, irrigators have consistently identified uncertainty of water allocation, lack of financial resources and inadequate water availability as barriers to upgrading on-farm irrigation infrastructure (Table 1).

Table 1: Barriers to upgrading on-farm infrastructure

Barriers	2019/20 (%)	2015/16 (%)	2004/05 (%)
Uncertainty of water allocation	64.7	53.9	47.1
Lack of financial resources	46.8	52.6	50.2
Inadequate water availability	43.0	46.1	19.3
Age or poor health	23.8	17.7	12.9
Lack of time	14.9	21.1	20.0
Doubts about likely success	14.8	9.4	12.1
Connections / outlet modernisation	11.4	26.3	N/A
Insufficient or inadequate information	6.3	7.6	3.6
No barriers	-	5.5	N/A

Accompanying fact sheets and full technical report are available at **www.gbcma.vic.gov.au**

This project is delivered and funded by partnerships between Department of Environment, Land, Water and Planning, Agriculture Victoria, Goulburn Broken and North Central Catchment Management Authorities, Goulburn Murray Water, Murray Dairy and HMC Property Group. These organisations do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purpose and therefore disclaim all liability for error, loss or other consequence which may arise from relying on this publication's information.